

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of operating a power line communication system (PLCS) comprised of for communicating over an electrical power distribution network (EPDN) having a plurality of medium power lines, and wherein the PLCS includes a plurality of power line network elements, with each network element having a first port coupled to one of the plurality of medium voltage power lines of the EPDN at a different locations location and a second port in communication with one or more user devices disposed at one or more customer premises, the method comprising:

receiving network element information relating to the plurality of the power line network elements transmitted, at least in part, via one or more medium voltage power lines of the EPDN; and

storing said network element information in a memory; and

wherein said network element information comprises ~~an~~ a network element address ~~and information identifying the network element.~~

2. (Original) The method of claim 1, wherein said network information further comprises information relating to the physical location of the network element.

3. (Original) The method of claim 1, wherein said network element address comprises an IP address.

4. (Original) The method of claim 3, wherein said network element address comprises a MAC address.

5. (Original) The method of claim 1, wherein said network element address comprises a MAC address.

6. (Original) The method of claim 1, further comprising transmitting a device address to a network element.

7. (Original) The method of claim 6, wherein said device address is an IP address.

8. (Original) The method of claim 6, wherein said device address is an address for a low voltage interface of the network element.

9. (Currently Amended) The method of claim 1, further comprising transmitting a subnet mask to a network ~~device~~ element.

10. (Currently Amended) The method of claim 1, further comprising transmitting customer information to a network ~~device~~ element.

11. (Original) The method of claim 1, wherein the customer information is transmitted, at least in part, via the EPDN.

12. (Original) The method of claim 10, wherein said customer information comprises an encryption key.

13. (Original) The method of claim 10, wherein said customer information comprises data filtering information.

14. (Original) The method of claim 10, wherein said customer information comprises a user device address.

15. (Original) The method of claim 10, wherein said customer information comprises a subscription level.

16. (Currently Amended) The method of claim 1, further comprising transmitting a ~~DNS~~ Domain Name Service address to a network element.

17. (Original) The method of claim 1, further comprising transmitting a registration server address to a network element.

18. (Original) The method of claim 1, further comprising:
receiving a notification of a new user device; and
storing information of said notification in a memory.

19. (Currently Amended) The method of claim 1 or 18, wherein the receiving comprises communication of the notification, at least in part, via the EPDN.

20. (Original) The method of claim 1, further comprising:
receiving user information;
receiving payment information; and
storing said user information.

21. (Original) The method of claim 20, wherein the receiving comprises communication of said user information, at least in part, via the EPDN.

22. (Original) The method of claim 20, wherein said user information comprises a user name and a user address.
23. (Original) The method of claim 20, further comprising transmitting an activation notice to a network element servicing the user.
24. (Original) The method of claim 1, further comprising:
identifying a power outage on the EPDN; and
determining a location associated with the power outage.
25. (Original) The method of claim 24, wherein said determining comprises receiving power outage information of the EPDN wherein said power outage information is communicated, at least in part, via the EPDN.
26. (Original) The method of claim 24, further comprising transmitting information of the power outage and information relating to the location of the power outage.
27. (Original) The method of claim 1, further comprising receiving information of an unauthorized attempt to access the PLCS.
28. (Original) The method of claim 1, further comprising receiving a request for permission to access the PLCS.
29. (Original) The method of claim 1, further comprising receiving a request for an address from a network element.
30. (Original) The method of claim 29, further comprising:
determining an address for the network element; and
transmitting said address to the network element.
31. (Original) The method of claim 30, wherein said address is transmitted, at least in part, via the EPDN.
32. (Original) The method of claim 1, further comprising:
determining an address for the network element; and
transmitting said address to the network element.
33. (Original) The method of claim 1, further comprising transmitting a command to download software to a network element.
34. (Original) The method of claim 33, wherein said command is transmitted, at least in part, via the EPDN.

35. (Original) The method of claim 33, further comprising transmitting a file name and address for downloading the software.

36. (Original) The method of claim 35, further comprising:
receiving a request for software from the network element; and
transmitting the software to the network element in response to the request for software.

37. (Original) The method of claim 36, further comprising transmitting a command to use the transmitted software.

38. (Original) The method of claim 1, further comprising:
receiving a request for software from a network element; and
transmitting the software to the network element in response to the request for software.

39. (Original) The method of claim 38, further comprising transmitting a command to use the transmitted software.

40. (Original) The method of claim 1, further comprising:
receiving an out of limit notification; and
storing said out of limit notification in memory.

41. (Original) The method of claim 1, further comprising transmitting a time synchronization command to a network element wherein said time synchronization command comprises time information.

42. (Original) The method of claim 41, wherein said time synchronization command is transmitted, at least in part, via the EPDN.

43. (Original) The method of claim 1, further comprising transmitting a command for measurement intervals.

44. (Original) The method of claim 1, further comprising transmitting a request for data to a network element device.

45. (Original) The method of claim 44, wherein said request is transmitted, at least in part, via the EPDN.

46. (Currently Amended) The method of claim 44, wherein said requested data comprises the an amount of data communicated by the network element device.

47. (Currently Amended) The method of claim 44, wherein said requested data comprises ~~the~~ an amount of data received by a user device.

48. (Original) The method of claim 44, wherein said requested data comprises temperature data.

49. (Original) The method of claim 44, wherein said requested data comprises voltage data.

50. (Original) The method of claim 49, wherein said voltage data is based on at least one low voltage measurement by the network element device.

51. (Original) The method of claim 49, wherein the voltage data comprises time data.

52. (Original) The method of claim 44, wherein said requested data comprises electrical current data.

53. (Original) The method of claim 44, further comprising:
receiving said requested data; and
storing said requested data.

54. (Currently Amended) The method of claim 1, further comprising:
receiving a request from a user to filter data; and
transmitting filtering information based on said filter data to a network device element.

55. (Original) The method of claim 1, further comprising transmitting a reset command to a network element.

56. (Original) The method of claim 55, wherein said command is transmitted, at least in part, via the EPDN.

57. (Currently Amended) A computer program product in a computer readable medium for operating a power line communication system (PLCS) ~~comprised of~~ for communicating over an electrical power distribution network (EPDN) and having a plurality of medium voltage power lines, and wherein the PLCS includes a plurality of power line network elements, with each network element having a first port coupled to one of the plurality of medium voltage power lines of the EPDN at a different locations location and a second port in communication with one

or more user devices disposed at one or more customer premises, the program comprising:

a first code segment ~~for transmitting to transmit~~ a request for data to a network element, at least in part, via a medium voltage power line of the EPDN;

a second code segment ~~for receiving and storing said to receive and store~~ a response to said request for data, wherein the response is communicated, at least in part, via a medium voltage power line of the EPDN;

a third code segment ~~for transmitting to transmit~~ a command to a network element, at least in part, via a medium voltage power line of the EPDN; and

a fourth code segment ~~for storing to store~~ information identifying the network element, an address of the network element, and the physical location of the network element.

58. (Currently Amended) The computer program product of claim 57, wherein said command comprises ~~is~~ a reset command.

59. (Currently Amended) The computer program product of claim 57, wherein said command comprises a time synchronization command.

60. (Currently Amended) The computer program product of claim 57, wherein said command comprises a ~~DNS~~ Domain Name Service address.

61. (Currently Amended) The computer program product of claim 57, further comprising:

a fifth code segment for determining an IP address for a network element; and
a sixth code segment for transmitting said IP address to the network element.

62. (Currently Amended) The computer program product of claim 57, further comprising a code segment for transmitting customer information to a network device element.

63. (Currently Amended) The computer program product of claim 62, wherein said customer information comprises an encryption key.

64. (Currently Amended) The computer program product of claim 62, wherein said customer information comprises a subscription level.

65. (Currently Amended) The computer program product of claim 57, further comprising:

a fifth code segment for receiving user information;
a sixth code segment for receiving payment information; and
a seventh code segment storing said user information.

66. (Currently Amended) The computer program product of claim 57, further comprising a fifth code segment for identifying a power outage.

67. (Currently Amended) The computer program product of claim 61, wherein the network element comprises a coupler configured to communicatively couple to a street light.

68. (Currently Amended) A method of operating a power line communication system (PLCS) ~~comprised of~~ for communicating over an electrical power distribution network (EPDN) and having a plurality medium voltage power lines, and wherein the PLCS includes a plurality of power line network elements, with each network element having a first port coupled to one of the plurality of medium voltage power lines of the EPDN at a different locations location and a second port in communication with one or more user devices disposed at one or more customer premises, the method comprising:

storing said network element information in a memory wherein said network element information comprises an address and information identifying the network element;

transmitting a request for data to a network element, at least in part, via a medium voltage power line of the EPDN;

receiving a response from said request that is transmitted, at least in part, over a medium voltage power line of the EPDN;

storing at least a portion of said response; and

transmitting a command to a network element; , at least in part, via a medium voltage power line of the EPDN.

69. (Original) The method of claim 68, further comprising:

receiving user information;

receiving payment information; and

storing said user information.

70. (Original) The method of claim 68, wherein said command comprises a reset command.

71. (Original) The method of claim 68, wherein said command comprises a time synchronization command.

72. (Original) The method of claim 68, wherein said command comprises a DNS address.

73. (Original) The method of claim 68, further comprising:
determining an IP address for a network element; and
transmitting said IP address to the network element, at least in part, via the EPDN.

74. (Currently Amended) The method of claim 68, further comprising transmitting customer information to a network ~~device~~ element.

75. (Original) The method of claim 74, wherein said customer information comprises an encryption key.

76. (Original) The method of claim 74, wherein said customer information comprises a subscription level.

77. (Original) The method of claim 68, further comprising:
receiving user information;
receiving payment information; and
storing said user information.

78. (Currently Amended) The ~~computer program~~ method of claim 68, further comprising identifying a power outage.